

Science and Technology Law Review

Volume 12 | Number 2

Article 5

2009

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Recommended Citation

Ben Morgan, *Joint Infringement and the Impact of BMC Resources, Inc. v. Paymentech, L.P.*, 12 SMU SCI. & TECH. L. REV. 173 (2009)
<https://scholar.smu.edu/scitech/vol12/iss2/5>

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Joint Infringement and the Impact of *BMC Resources, Inc. v. Paymentech, L.P.*

Ben Morgan*

This comment addresses so-called “joint-infringement” claims. Generally speaking, a patent holder might bring a joint-infringement suit if he feels that his patent has been infringed upon by the collective action of multiple parties, rather than by a single actor. Section I of this comment provides an overview of joint infringement and outlines the various tests courts have used to handle these claims. Section II focuses on the joint-infringement test recently promulgated by the United States Court of Appeals for the Federal Circuit (“CAFC”), which sharply limits the potential for joint-infringement liability.¹ Section III argues that the CAFC’s new joint-infringement standard is not adequately supported by legal precedent, creates uncertainty, and does not promote the goals and policies of the Patent Act of 1952. Finally, Section IV provides advice for patentees and suggests ways that either the CAFC or Congress could resolve some of the persistent, troublesome issues presented by joint infringement claims.

I. BACKGROUND

A. Direct Infringement vs. Indirect Infringement

Patent-infringement liability comes in two basic forms: direct infringement and indirect infringement.² Direct-infringement liability attaches to “[w]hoever without authority makes, uses, offers to sell, or sells any patented invention.”³ In most cases, to be liable for direct infringement, the alleged infringer must “perform or use each and every step or element of a claimed method or product.”⁴ Direct infringement is a strict liability offense.⁵ That is, a defendant who has performed each and every element of the patented

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1. *Compare* *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380-81 (Fed. Cir. 2007) (requiring the defendant to have “control or direction” over the multiple parties involved), *with* *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1345 (Fed. Cir. 2006) (finding no flaw in a jury instruction that stated, “When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement”).
2. *See, e.g.*, *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004).
3. Patent Act of 1952, 35 U.S.C. § 271(a) (2003).
4. *BMC*, 498 F.3d at 1378.
5. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1527 (Fed. Cir. 1995).

invention will be liable for direct infringement regardless of the defendant's intent.⁶

Indirect-infringement liability may arise in two different ways: induced infringement or contributory infringement.⁷ For both types of indirect infringement, the plaintiff must first prove that someone else directly infringed the patent.⁸ As the CAFC has stated, "[l]iability for either active inducement of infringement or for contributory infringement is dependent upon the existence of direct infringement."⁹ Unlike direct infringement, both forms of indirect infringement have *mens rea* requirements.¹⁰

Congress has codified liability for inducing infringement at 35 U.S.C. § 271(b), which provides, "[w]hoever actively induces infringement of a patent shall be liable as an infringer."¹¹ The CAFC has now interpreted this section to require "specific intent" to induce infringement.¹² In essence, § 271(b) creates liability for those who—with the required *mens rea*—aid, abet, or encourage another to infringe.¹³

Contributory infringement, on the other hand, is codified in § 271(c) of the Patent Act:

Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.¹⁴

Congress enacted the contributory infringement rules to punish a manufacturer who sells a product to a customer knowing that the customer will use

6. *Id.*

7. *See Dynacore*, 363 F.3d at 1272.

8. *Carborundum Co. v. Molten Metal Equip. Innovations, Inc.*, 72 F.3d 872, 876 n.4 (Fed. Cir. 1995).

9. *Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 774 (Fed. Cir. 1993).

10. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007).

11. Patent Act of 1952, 35 U.S.C. § 271(b) (2003).

12. *BMC*, 498 F.3d at 1381.

13. *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 668 (Fed. Cir. 1988) (finding that one induces infringement "by actively and *knowingly* aiding and abetting another's direct infringement") (emphasis in original).

14. Patent Act of 1952 § 271(c).

that product, because of its specialized nature, to infringe a patented process.¹⁵

B. Joint Infringement

Joint infringement occurs when multiple parties collectively perform each and every element of the patented invention, but no party does so individually.¹⁶ Joint infringement has no statutory basis; it is a judicially-created doctrine.¹⁷ A claim of joint infringement allows a patentee, in certain circumstances, to aggregate the actions of multiple parties. This may allow a patentee to bring a direct-infringement suit against a defendant who has not technically performed each and every element of the patent claim, as direct infringement traditionally requires.¹⁸

The rationale behind joint infringement is sound: a bright-line rule requiring that an alleged infringer individually perform each and every element of a patent claim could be too easily averted, thus reducing the protection patent holders need. Under such a rule, an individual could avoid direct-infringement liability by simply compelling a third party to perform one or more elements of the patent claim.¹⁹

A simple example illustrates the point. Assume a patented process has four steps. X performs steps one and two of the process, and then pays Y to

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15. See *Metro-Goldwyn-Mayer Studios Inc. v. Gorkster, Ltd.*, 545 U.S. 913, 932 (2005) (“The doctrine [of contributory infringement] was devised to identify instances in which it may be presumed from distribution of an article in commerce that the distributor intended the article to be used to infringe another’s patent, and so may justly be held liable for that infringement. ‘One who makes and sells articles which are only adapted to be used in a patented combination will be presumed to intend the natural consequences of his acts; he will be presumed to intend that they shall be used in the combination of the patent’”) (quoting *New York Scaffolding Co. v. Whitney*, 224 F. 452, 459 (8th Cir. 1915)).
 16. See *BMC*, 498 F.3d at 1379.
 17. See, e.g., *E.I. DuPont de Nemours & Co. v. Monsanto Co.*, 903 F. Supp. 680, 735 (D. Del. 1995) (“DuPont alleges that Monsanto is liable under § 271(a) on a theory of joint infringement or joint manufacture. Although DuPont’s theory of joint infringement is interesting, the Court declines to find that Monsanto is liable as a direct infringer under § 271(a) in connection with its conduct in practicing step (a) of the claimed . . .”).
 18. *BMC*, 498 F.3d at 1378 (“As the parties agree, Paymentech does not perform every step of the method at issue in this case. With other parties performing some claimed method steps, this court must determine if Paymentech may nonetheless be liable for direct infringement under 35 U.S.C. § 271(a)”).
 19. *AdvanceMe, Inc. v. RapidPay, LLC*, 509 F. Supp. 2d 593, 605 (E.D. Tex. 2007) (“Liability for direct infringement cannot be avoided by interposing an agent or independent contractor between the defendant and the infringing acts”).

perform steps three and four. Under a bright-line rule mandating that a single defendant performs every element of the patent process, neither X nor Y is liable for direct infringement. Furthermore, neither party would be subject to indirect-infringement liability, which requires a preliminary showing of direct infringement.²⁰ The joint-infringement doctrine seeks to close this loophole and prevent the circumvention of infringement liability.

C. Various Joint-Infringement Tests

Courts have not reached a consensus over how to address joint-infringement claims. Generally, courts look first to whether each and every element of the patent claim has been performed, albeit by multiple parties.²¹ Next, courts focus on the relationship between the multiple parties who collectively performed each element of the patent infringement.²² The stronger the relationship between those parties, the more likely the court will find joint-infringement liability.

In analyzing the relationship between the alleged joint infringers, courts have found the following factors to be significant: (1) whether the alleged infringers were in an agency relationship;²³ (2) whether the infringement resulted from the “participation and combined action” of the alleged infringers;²⁴ (3) whether one alleged infringer contracted out steps of a patented process to another;²⁵ (4) whether there was a “connection” between the alleged infringers of sufficient strength to justify treating them as one party for infringement purposes;²⁶ and (5) whether one of the alleged infringers “directed” the other(s).²⁷

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20. *See* Carborundum Co. v. Molten Metal Equip. Innovations, Inc., 72 F.3d 872, 876 n.4 (Fed. Cir. 1995) (“Absent direct infringement of the claims of a patent, there can be neither contributory infringement nor inducement of infringement”).
 21. *See, e.g., AdvanceMe*, 509 F. Supp. 2d 605 (“Even if a defendant does not perform all patented method steps, the defendant is still liable for direct infringement where it is demonstrated by a preponderance of the evidence that (1) *the steps of the patented method are being performed*, and (2) defendant has sufficient connection to, or control over, the entity or entities performing part of the patented method”) (emphasis added).
 22. *Id.*
 23. *Crowell v. Baker Oil Tools*, 143 F.2d 1003, 1004 (9th Cir. 1944).
 24. *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980), *aff’d*, 667 F.2d 1232 (5th Cir. 1982).
 25. *E.I. DuPont de Nemours & Co. v. Monsanto Co.*, 903 F. Supp. 680, 735 (D. Del. 1995).
 26. *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 WL 111788, at * 5 (N.D. Cal. Feb. 24, 1999).
 27. *Charles E. Hill v. Amazon.com, Inc.*, No. Civ. A. 2:02-CV-186, 2006 WL 151911, at *2 (E.D. Tex. Jan. 19, 2006).

Many of the aforementioned factors are neither terribly descriptive nor particularly helpful in providing guidance for courts analyzing joint infringement claims. One would be hard-pressed to say, for example, whether a relationship is based on “direction,” “some connection,” “participation and combined action,” or a combination of these three factors. Nonetheless, the issue that courts struggle with is clear: how broad or narrow should the scope of liability be in joint-infringement cases? For instance, a standard that requires one of the alleged infringers to “direct” the other parties recognizes only a narrow sphere of joint-infringement liability. On the other hand, if a patentee need only show “some connection” or “combined participation and action” between the alleged infringers, the patentee is more likely to succeed on a theory of joint infringement.

1. Agency and Joint Infringement

At least one area of joint-infringement law is well-settled: an alleged infringer cannot avoid liability simply because an agent performed one or more steps of the patented process.²⁸ If a principal and his agent collectively practice each and every element of a patent infringement, the principal will be liable for direct infringement.²⁹ The most frequently cited case for this proposition is *Crowell v. Baker Oil Tools, Inc.*, in which the Ninth Circuit said it was “obvious” that infringement can still exist if a party uses an agent or independent contractor to execute his or her infringement.³⁰ Because a principal and his agent act as a single legal entity, however, *Crowell* does not address the effect of a “true” joint-infringement claim “where there is no agency relationship or similar coordination—for example where the different actors do not know each other at all or are in an arm’s-length business transaction.”³¹

2. The “Participation and Combined Action” Joint-Infringement Standard

In *Shields v. Halliburton Co.*,³² the patent at issue was a twelve-step, high-pressure grouting process for use in constructing off-shore oil plat-

28. See *AdvanceMe, Inc. v. RapidPay, LLC*, 509 F. Supp. 2d 593, 605 (E.D. Tex. 2007) (“Liability for direct infringement cannot be avoided by interposing an agent or independent contractor between the defendant and the infringing acts”). See also *Ralston Purina Co. v. Far-Mar-Co., Inc.* 586 F. Supp. 1176, 1226 (D. Kan. 1984) (“It is well settled that a party cannot avoid liability by merely having a third party practice one or more of the required steps”).

29. *AdvanceMe*, 509 F. Supp. at 605.

30. *Crowell v. Baker Oil Tools*, 143 F.2d 1003, 1004 (9th Cir. 1944).

31. Mark A. Lemley et. al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 260 (2005).

32. *Shields v. Halliburton Co.*, 493 F. Supp. 1376 (W.D. La. 1980), *aff’d*, 667 F.2d 1232 (5th Cir. 1982).

forms. The plaintiff alleged that the defendants, Halliburton and Brown & Root, Inc., infringed its patent on four different occasions. On no single occasion, however, did either of the defendants individually perform all twelve steps described in the patent claim. For instance, the evidence showed that on one job, Brown & Root controlled the air pressure while Halliburton simultaneously pumped grout. Nonetheless, the court held, “[w]hen infringement results from the *participation and combined action* of several parties, they are all joint infringers and jointly liable for patent infringement.”³³

3. Contracting Out Steps of a Patented Process and Joint Infringement

In *E.I. DuPont de Nemours & Co. v. Monsanto Co.*, the plaintiff brought a direct-infringement suit against two defendants, Monsanto and CaMac Corporation.³⁴ DuPont alleged that the two defendants had jointly infringed the plaintiff’s patented process of creating nylon commercial carpet fibers. The U.S. District Court for the District of Delaware found, “Monsanto actually practices step (a) of the claimed process and sells the resulting copolymer to CaMac, who then practices steps (b) and (c).”³⁵ In holding CaMac liable as a direct infringer, the court explained that “[a] party cannot avoid liability for having someone else perform one or more steps of a patented process for them [. . .] CaMac cannot avoid liability for infringement of DuPont’s process patent by paying Monsanto to practice step (a) of the patented process for it.”³⁶ Monsanto, on the other hand, escaped direct-infringement liability. The court seemed to believe that CaMac had “contracted out” steps of the patented process to Monsanto, but not vice versa.³⁷ The court wrote that it seemed “that this principle is more appropriately applied to CaMac than to Monsanto.”³⁸

4. The “Some-Connection” Joint-Infringement Standard

Other courts have required that “some connection” exist between the multiple parties who collectively perform each and every element of the patent claim in order to bring a joint-infringement suit. The origin of the “some connection” variant of joint infringement is *Faroudja Laboratories, Inc. v.*

33. *Id.* at 1389 (emphasis added).

34. *E.I. DuPont de Nemours and Co. v. Monsanto Co.*, 903 F. Supp. 680 (D. Del. 1995).

35. *Id.* at 734.

36. *Id.* at 735.

37. *See id.*

38. *Id.*

*Dwin Electronics, Inc.*³⁹ The U.S. District Court for the Northern District of California, attempting to synthesize the seemingly inconsistent joint-infringement case law, wrote that “[i]t is true that several district courts have found a party liable for direct infringement of a process patent even where the various steps included in the patent are performed by distinct entities. However, these cases indicate that *some connection* between the different entities justified that finding.”⁴⁰

In *Faroudja*, the court ultimately concluded that the requisite “connection” did not exist between the alleged joint infringers.⁴¹ Nonetheless, the court’s “some connection” language connotes a broader and more malleable scope of liability in joint infringement cases.

The “some-connection” test was next applied in *Cordis Corp. v. Medtronic AVE, Inc.*⁴² The District Court for the District of Delaware wrote that direct infringement requires that “[e]ither a single entity must perform every step of the method or, if two or more entities perform different steps of the method, those entities must have *some connection* to each other.”⁴³

In *Cordis*, the plaintiff alleged infringement of a patented process of selling, inserting, and expanding coronary stents. One of the defendants, Boston Scientific Corporation (“BSC”), admittedly performed one part of the patented process by selling its stent, which was pre-mounted on a balloon catheter. BSC argued, however, that it had not directly infringed plaintiff’s patent because physicians performed the other steps of the patented process, namely inserting and expanding the stent.⁴⁴ The court rejected BSC’s argu-

39. See *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 WL 111788 (N.D. Cal. Feb. 24, 1999) (claiming that the “some connection” doctrine was already implied in earlier cases).

40. *Id.* at *5 (emphasis added).

41. *Id.* at *6. *Faroudja* is somewhat confusing because the joint infringement issue came up in the context of plaintiff’s indirect-infringement claim. The plaintiff had patented a method of converting film to television, and then doubling the number of lines used to create the image, thereby increasing image quality. The defendant sold several types of “line-doublers,” but “the parties agree[d] that none of defendant’s line-doublers perform any film-to-television conversion, and that none of [defendant’s] line-doublers contain any structure designed for or capable of perform film-to-television conversion.” *Id.* at *2. Plaintiff alleged, among other things, that defendant had induced the third-party users of its line-doublers to directly infringe the patent. *Id.* at *5. The “connection” that plaintiff alleged, therefore, was actually between the third-party users of defendant’s line-doublers and the film-to-television transfer companies.” *Id.* at *6. It was this “connection” that the court found too tenuous to accept. *Id.*

42. *Cordis Corp. v. Medtronic AVE, Inc.*, 194 F. Supp. 2d 323, 349 (D. Del. 2002) (emphasis added).

43. *Id.* (emphasis added).

44. *Id.*

ment, holding that there was evidence sufficient to support a finding of “some connection” between BSC and the physicians.⁴⁵ This evidence included: (1) the “very close relationship” between BSC and the physicians, in which BSC taught the physicians about BSC’s products, how to use them, and their relative advantages; (2) BSC’s practice of sending sample stents to the physicians; and (3) BSC’s solicitation of feedback from physicians about BSC’s stent.⁴⁶

5. The “Direction” Joint-Infringement Standard

Some courts have found that only a defendant who “actually directs” the parties who collectively practice every element of a patent claim can be liable for direct infringement.⁴⁷ In *Hill v. Amazon.com, Inc.*, the United States District Court for the Eastern District of Texas purportedly applied the “some connection” test.⁴⁸ The court, however, required that the “defendant and the third party are connected at least to the extent that the *defendant must actually direct* the third party to perform the remaining steps of the [patented] method.”⁴⁹ Despite ostensibly adopting a “some-connection” standard, the court actually demanded that the defendant exert a greater amount of control than contemplated in *Faroudja* and *Cordis*.

D. Disparity in Courts’ Treatment of Similar Joint-Infringement Claims

Courts have clearly struggled to develop a framework that allows for a principled analysis of joint-infringement claims. While some courts closely adhere to the traditional rule that a defendant must perform each and every element of the patent claim, others are more lenient and allow the patentee to aggregate the conduct of multiple parties who collectively practice every element of the patent claim. Because of this disparity, it is difficult to predict the outcome of joint-infringement suits, even under factually similar conditions. The following two cases illustrate the point.

In *Mobil Oil Corp. v. W.R. Grace & Co.*, the defendant allegedly infringed patents related to the production and use of catalysts to break down petroleum into smaller molecules, a process which rendered more marketable gasoline.⁵⁰ The plaintiff’s patent described both the production of the catalysts themselves and heating the catalysts in “catalytic cracking units.” The defendant manufactured the catalysts, and thereby performed the first step of

45. *Id.* at 350.

46. *Id.*

47. *Charles E. Hill v. Amazon.com, Inc.*, No. Civ. A. 2:02-CV-186, 2006 WL 151911, at *2 (E.D. Tex. Jan. 19, 2006).

48. *Id.*

49. *Id.* (emphasis added).

50. *Mobil Oil Corp. v. W.R. Grace & Co.*, 367 F. Supp. 207 (D. Conn. 1973).

the patented claim.⁵¹ The defendant then sold the catalysts to its customers who, by heating the catalysts, performed the remaining steps of the patented process.⁵² Although the defendant had not performed each and every element of the patent claim individually, the court found it liable for infringement.⁵³ The court reasoned, “[D]efendant, in effect, made each of its customers its agent in completing the infringing step, knowing full well that the infringement step would in fact be promptly and fully completed by those customers.”⁵⁴

In *Fromson v. Advance Offset Plate, Inc.*, the patent at issue was a process for making photographic printing plates used in lithography.⁵⁵ Generally speaking, the process involved treating aluminum sheets with various chemicals and then applying a light-sensitive coating. The defendant performed the first part of the patented process and then sold the aluminum sheets to its customers, who applied the light-sensitive coating to the sheets and used them in lithography, as contemplated by the patent.

Although the manufacturer and its customers collectively performed each element of the patent claim, the CAFC summarily dismissed the notion that the manufacturer could be held liable for direct infringement.⁵⁶ The CAFC wrote, “Because the [patent] claims include the application of a [chemical] coating or other light sensitive layer and because [defendant’s] customers, not [defendant], applied the [light-sensitive] coating, [defendant] cannot be liable for direct infringement.”⁵⁷

In both *W.R. Grace* and *Fromson*, a manufacturer performed the preliminary steps of a patented process and sold the resulting product to its customers. Considering the unique nature of the products sold in both cases, the manufacturer gave implicit, if not express, instructions to its customers concerning the use of its products. The customers then proceeded to perform the final steps of the patented process. In each case, therefore, the manufacturer and its customer collectively performed each and every element of the patented process, although neither party performed all of the elements itself. Despite these marked similarities, the courts came to entirely different conclusions. In *W.R. Grace*, the court refused to allow the defendant to escape infringement liability by enlisting its customers to perform the final steps of the patent claim.⁵⁸ Conversely, in *Fromson*, the CAFC seemed reluctant to

51. *Id.* at 253.

52. *Id.*

53. *Id.*

54. *Id.*

55. *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565 (Fed. Cir. 1983).

56. *Id.* at 1568.

57. *Id.*

58. *W.R. Grace*, 367 F. Supp. at 253.

entertain the possibility of direct-infringement liability absent a showing that the defendant had performed each and every element of the patent claim.⁵⁹

E. Summary

Several points derive from the discussion above. First, most courts seem wary of promulgating a bright-line rule that each and every element of a process patent claim must be performed by a single entity.⁶⁰ One can easily see how a formalistic rule like the one in *Fromson* would fail to adequately protect the rights of patent holders. Potential infringers could escape infringement liability simply by outsourcing one or more steps of a patented process to a third party.

Second, the preceding cases illustrate the tension inherent in joint-infringement jurisprudence. On one hand, courts want to protect the inventions of patent holders; a defendant should not be able to infringe a patent with impunity by merely interposing a third party.⁶¹ On the other hand, an overly relaxed joint-infringement standard could create uncertainty and unreasonably expand the scope of infringement liability.

Third, courts appear unable to develop clear and consistent joint-infringement jurisprudence.⁶² Courts have repeatedly attempted to describe the character of the relationship between alleged infringers necessary for joint-infringement liability. They ask whether there is “some connection” or “participation and combined action” between the various parties. Courts have been unable, however, to consistently apply these vague tests. This has engendered much uncertainty in this area of law.

59. See *Fromson*, 720 F.2d at 1568.

60. *Compare* Faroudja Labs., Inc. v. Dwin Elecs., Inc., No. 97-20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999) (stating that some courts find liability where there is a connection between the two infringing parties), *and* Cordis Corp. v. Medtronic AVE, Inc., 194 F. Supp. 2d 323, 349 (D. Del. 2002) (holding that direct infringement by two entities requires some connection between the two), *with* *Fromson*, 720 F.2d at 1568 (Fed. Cir. 1983) (denying a direct infringement claim where the manufacturer did not perform all the steps of a patented claim).

61. *AdvanceMe Inc. v. RapidPay, LLC*, 509 F. Supp. 2d 593, 605 (E.D. Tex. 2007) (“Liability for direct infringement cannot be avoided by interposing an agent or independent contractor between the defendant and the infringing acts.”).

62. *Compare* *W.R. Grace*, 367 F. Supp. at 253 (holding a manufacturer liable for direct infringement even though its customers completed the infringement step), *with* *Fromson*, 720 F.2d at 1568 (holding that a manufacturer cannot be liable for direct infringement because its customers completed the final step of the patented process).

II. CURRENT LAW

In *BMC Resources, Inc. v. Paymentech, LP*, the CAFC announced a new standard in joint-infringement cases: a “mastermind” defendant may be liable for direct infringement so long as he “controls or directs” each step of the patented process.⁶³ In other words, a “mastermind” defendant may be liable for direct infringement despite not having performed each and every element of the patented process itself.⁶⁴

A. *On Demand Machine Corp. v. Ingram Industries, Inc.*⁶⁵

The CAFC’s decision in *BMC* was much anticipated.⁶⁶ This is because in *On Demand Machine Corp. v. Ingram Industries, Inc.*, a 2006 case, the CAFC appeared to endorse an expansive scope of liability in joint-infringement claims.⁶⁷ The patent at issue in *On Demand* was for a “system and method of manufacturing a single book copy.”⁶⁸ The patent contemplated special computers being installed in retail book stores for customer use. The computer would contain the entire text of many books, along with book reviews and other promotional material. After browsing this material, a customer could purchase a book, and a machine would print and bind a copy while the customer waited.

The defendants in the suit were Ingram Industries, Lightning Source, and Amazon.com, Inc. Ingram Industries was the corporate parent of Lightning Source, a book printing company who sold to publishers, wholesalers and retailers, such as Amazon.com. Although Lightning Source never sold directly to the public, as contemplated in *On Demand*’s patent, it would occasionally print a single copy of a book upon demand from a client, such as Amazon.com.

At trial, the jury found that the defendants had infringed *On Demand*’s patent and awarded \$15,000,000 in compensatory damages.⁶⁹ The defendants appealed, challenging, among other things, the accuracy of certain jury instructions.⁷⁰

63. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380-81 (Fed. Cir. 2007).

64. *See id.*

65. *On Demand Mach. Corp. v. Ingram Indus., Inc.* 442 F.3d 1331 (Fed. Cir. 2006).

66. *See* Posting of Dennis Crouch to Patently-O Patent Law Blog, http://www.patentlyo.com/patent/2007/03/divided_infring.html (March 15, 2007) (“The next big kahuna is *BMC v. Paymentech*,” because it “squarely presents the concept of divided infringement.”).

67. *See On Demand*, 442 F.3d at 1345.

68. *Id.*

69. *Id.* at 1336.

70. *Id.* at 1337.

The CAFC ultimately reversed, holding that no reasonable jury could have found infringement based upon the application of the correct claim construction.⁷¹ However, the CAFC noted that it found no flaw with the following jury instruction:

It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process cannot be avoided by having another perform one step of the process or method.⁷²

The language of this jury instruction came directly from *Shields v. Halliburton*, in which defendants Halliburton and Brown & Root were both held liable for direct infringement based upon their collective infringement of a high-pressure grouting process patent.⁷³ In *Shields*, the plaintiff presented no evidence that Halliburton controlled Brown & Root, or vice versa. Rather, it appeared that Halliburton and Brown & Root were merely working together on a grouting project and, in doing so, collectively performed each element of the patented process.⁷⁴

In *On Demand*, therefore, the CAFC appeared to give its blessing to a pliable test that potentially expanded the scope of liability in joint-infringement cases.⁷⁵ Yet, the CAFC offered no analysis in approving the jury instruction, and its approval was arguably dicta in the first place.⁷⁶ Thus, *BMC*

71. *Id.* at 1345 (“The fundamental precept of the [On Demand] invention is that the customer uses an on-site compute to view promotional information, and then initiates rapid single copy printing. A customer placing an order with Amazon, who in turn obtains the book, even if it is printed in single copy, is not the [On Demand] invention . . . The printing of a single copy of a book, using computer technology and high-speed printing, was prior art to the [On Demand] patent. The defendants correctly point out that the [On Demand] invention is the *immediate* printing and binding of a copy of a book.”) (emphasis added).

72. *Id.* at 1344-45.

73. *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980), *aff’d*, 667 F.2d 1232 (5th Cir. 1982) (“When infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method”) (internal citation omitted).

74. *See id.* at 1387.

75. *See On Demand*, 442 F.3d at 1345. Reading *On Demand* literally, it appears that a defendant who merely participates to some degree in the infringement of a patent can be held jointly and severally liable for plaintiff’s damages. *Id.*

76. *Id.* Beyond quoting the jury instruction and stating, “We discern no flaw in this instruction as a statement of law,” the CAFC did not discuss the issue of joint

was perceived to be the case in which the CAFC would resolve the uncertainty created by *On Demand* with respect to the proper analysis of joint infringement claims.

B. *BMC Resources, Inc. v. Paymentech, L.P.*

1. Factual Background

BMC Resources, Inc. (“BMC”) patented a method for paying bills by debit card over the telephone without the use of personal identification number. The customer (payer) calls the merchant (payee) and provides payment information through an interactive voice response unit. The information is then transmitted to the debit network and card-issuing financial institution to approve and complete the transaction. The patent, therefore, necessarily implicated the actions of multiple parties in each transaction, namely the payer, the payee’s third-party agent (e.g. BMC), the debit network, and the financial institution.

Paymentech, L.P. (“Paymentech”) is a third-party processor of financial transactions that developed a telephonic bill-payment system nearly identical to that of BMC. In Paymentech’s system, a bill-paying customer calls the merchant and provides payment information, which is sent to Paymentech. Paymentech in turn routes the information to the debit network and financial institution for authorization.

Upon learning of Paymentech’s bill-payment system, BMC demanded that Paymentech enter into a licensing agreement to use its patented method. Paymentech refused and filed suit in federal district court, seeking a declaratory judgment that it had not infringed BMC’s patent.⁷⁷ BMC counterclaimed, alleging that Paymentech had directly infringed BMC’s patent.⁷⁸ Both parties agreed that Paymentech did not perform each and every element of the patent claim itself.⁷⁹ Relying on *On Demand*, BMC argued that the “participation and combined action” between Paymentech, the debit networks, and financial institutions constituted a sufficient “connection” to hold Paymentech liable for direct infringement.⁸⁰

infringement. *Id.* The CAFC ultimately reversed the judgment of infringement on the claim construction issue. *Id.*

77. *BMC Res., Inc. v. Paymentech, L.P.*, No. 3:03-CV-1927-M, 2006 WL 1450480 at *1 (N.D. Tex. May 24, 2006).

78. *Id.* Although Paymentech filed its suit for declaratory judgment first, the parties realigned after BMC’s counterclaim, with BMC as plaintiff and Paymentech as defendant. *Id.*

79. *See id.* at *4.

80. *Id.* at *3.

2. CAFC Adopts “Control-or-Direction” Joint-Infringement Standard

The CAFC began its analysis by stating the traditional rule that “[i]nfringement requires, as it always has, a showing that a defendant has practiced each and every element of the claimed invention.”⁸¹ Nonetheless, the CAFC did carve out a narrow exception to this general rule.⁸² In a case brought on a joint-infringement theory, a “mastermind” defendant may be held liable for direct infringement if he controls or directs the performance of each step of the patented process, even if he does not practice each element himself.⁸³

BMC argued that “*On Demand* adopted a ‘participation-and-combined-action’ standard as the type of ‘connection’ a plaintiff must show to prove joint infringement.”⁸⁴ According to BMC, this flexible standard embraced the type of “participation and combined action” found between Paymentech, its customers, and the financial institutions.⁸⁵

The CAFC, however, flatly rejected BMC’s argument and dismissed as dicta the CAFC’s approval of the jury instruction in *On Demand*.⁸⁶ The court stated, “*On Demand* did not change this court’s precedent with regard to joint infringement.”⁸⁷ The CAFC went on to explain that “[a]s Paymentech succinctly noted in its brief, ‘[i]t is unlikely the Court intended to make a major change in its jurisprudence in the *On Demand* [statement] that was not even directly necessary to its decision in the case.’”⁸⁸ By rejecting the “participation-and-combined-action” standard of *On Demand* in favor of “control or direction,” the CAFC clearly intended to sharply limit the scope of joint-infringement liability.⁸⁹

3. CAFC’s Rationale for “Control-or-Direction” Standard

In *BMC*, the CAFC offered three main arguments in support of a “control-or-direction” standard in joint-infringement cases. First, the court argued that a looser joint-infringement standard would subvert the statutory scheme of § 271 of the Patent Act by rendering its indirect-infringement provisions

81. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007).

82. *See id.* at 1380-81.

83. *Id.*

84. *Id.* at 1380.

85. *See id.*

86. *Id.*

87. *Id.*

88. *Id.*

89. *See id.* at 1378 (calling the “some connection” test advocated by BMC a “looser standard of joint infringement” and a “relaxed rule”).

unnecessary.⁹⁰ The CAFC's second argument was essentially pragmatic: the need to bring a joint-infringement suit could be avoided by the patentee's proper claim drafting.⁹¹ Finally, the court made a policy judgment that a less restrictive standard for joint infringement suits would unjustifiably expand the scope of potential infringement liability.⁹²

The CAFC wrote in *BMC* that holding Paymentech liable for direct infringement would "subvert the statutory scheme for indirect infringement."⁹³ As discussed above, both forms of indirect-infringement liability require proof of direct infringement and have *mens rea* requirements.⁹⁴ The CAFC wrote, "Under BMC's proposed approach, a patentee would rarely, if ever, need to bring a claim for indirect infringement."⁹⁵

Although the CAFC makes this statutory construction argument in relatively perfunctory terms, Professor Mark Lemley explains the idea in more detail in an article titled *Divided Infringement Claims*, which was cited in *BMC*:

Construing the patent laws to permit the individual, non-infringing acts of unrelated parties together to add up to infringement would render both § 271(b) and § 271(c) meaningless. Section 271(b) provides that a party is liable if it knowingly induces another to infringe. But on a theory of joint infringement, no one need ever sue for inducement. All they need allege is that a party performed one of many steps of a method, and that someone else performed another step. No intent would be required. The result would be to unreasonably expand liability for indirect infringement by conflating it with direct infringement.⁹⁶

In essence, the CAFC argues that a "participation-and-combined-action" standard nullifies the indirect-infringement provisions of the Patent Act, along with their *mens rea* requirements, because a plaintiff would simply aggregate the conduct of the multiple parties in a joint-infringement suit, which is a strict-liability offense.⁹⁷ Because the CAFC believed that Congress could not have intended such a result, it adopted a "control-of-direction" test instead.

90. *Id.* at 1381.

91. *Id.*

92. *See id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. Lemley, *supra* note 31, at 262.

97. *BMC*, 498 F.3d at 1381.

In support of its holding, the CAFC also argued that proper claim drafting would obviate the patentee's need to bring a joint infringement claim in the first place.⁹⁸ The CAFC wrote:

The concerns over a party avoiding infringement by arms-length cooperation can usually be offset by proper claim drafting. A patentee can usually structure a claim to capture infringement by a single party. In this case, for example, BMC could have drafted its claim to focus on one entity. The steps of the claim might have featured references to a single party's supplying or receiving each element of the claimed process. However, BMC chose instead to have four different parties perform different acts within one claim.⁹⁹

Again, the CAFC cited Professor Lemley's article, which explains the utility of drafting "unitary" rather than "distributed" claims.¹⁰⁰ As an example, Lemley drafts the same method of claim for negotiating a secure communications session twice: once as a "unitary" claim and then as a "distributed" claim.¹⁰¹ In the "unitary" claim, every step of the method claim focuses on the server's involvement in that step, rather than on the other parties implicated in the transaction.¹⁰² For instance, the first step of Lemley's poorly-drafted "distributed" claim is the remote client "transmitting a request to a server."¹⁰³ Conversely, the first step of Lemley's properly-drafted "unitary" claim is the server "receiving a request from a client."¹⁰⁴ A simple grammatical change shifts focus away from the remote client's transmission of information to the server's receipt of that information.

The rest of Lemley's unitary claim is drafted in the same manner; it concentrates on the server's actions in each step.¹⁰⁵ Since the server is the only actor in the claim, the patentee has no need to rely on a joint-infringement theory if he feels his patent has been infringed. Rather, the patentee could simply bring a direct-infringement suit against the allegedly infringing server. Furthermore, if the patentee feels that another party, such as the remote client in Lemley's example, had contributed to, or induced, the direct infringement, the patentee could bring suit against that party under § 271(b)

98. *Id.*

99. *Id.* at 1381 (internal citations omitted).

100. *See* Lemley, *supra* note 31, at 272-73.

101. *Id.*

102. *Id.* at 272-73 ("Most inventions that involve cooperation of multiple entities can be covered using claims drafted in unitary form simply by focusing on one entity and whether it supplies or receives any given element").

103. *Id.*

104. *Id.* at 273.

105. *Id.* at 272-73.

or (c) of the Patent Act. Conscientious claim drafting, therefore, allows the holder of a patent involving multiple parties to effectively enforce the claim without resorting to the more novel and unpredictable theory of joint infringement.

Finally, part of the CAFC's rationale for its "control-or-direction" standard appears to be a policy judgment that an independent party ought not be held liable for infringement by virtue of having unknowingly performed one step in a patented process, even if that leaves a patentee without a remedy. The court said it "acknowledges that the standard requiring control or direction for a finding of joint infringement may in some circumstances allow parties to enter into arms-length agreements to avoid infringement. Nonetheless, this concern does not outweigh concerns over expanding the rules governing direct infringement."¹⁰⁶

By specifically acknowledging that those in "arms-length agreements" will sometimes escape infringement liability, the CAFC sends a message to business entities that they should not be apprehensive about the prospect of jointly infringing a patent with a business partner. Although the CAFC does not expressly make the argument, one can see how fear and anxiety about infringement liability could make businesses less likely to cooperate, which would have negative economic implications. A "control-or-direction" standard, therefore, might enhance economic productivity by allowing businesses to contract freely, without fear of infringement liability.

C. Summary of Current Law

In *On Demand*, the CAFC appeared to embrace a flexible joint-infringement standard that was quite favorable to patentees.¹⁰⁷ In *BMC*, however, the CAFC did an about-face and dismissed as dicta the *On Demand* joint-infringement language.¹⁰⁸ Going forward, a patentee must prove that a single defendant controlled or directed the performance of every step of the patented process in order to prevail on a joint-infringement claim.¹⁰⁹ This change makes it more difficult for a patentee to bring suit on a joint-infringement theory.

106. See *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007).

107. See *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1344-45 (Fed. Cir. 2006).

108. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007).

109. *Id.*

III. ANALYSIS OF *BMC*, SUGGESTIONS FOR PATENTEES, AND POTENTIAL SOLUTIONS TO THE PROBLEMS CREATED BY JOINT INFRINGEMENT

A. Critique of the CAFC's "Control-or-Direction" Standard

The CAFC's recently adopted "control-or-direction" standard has several problems. First, the CAFC's holding is not adequately supported by legal precedent. Second, although the CAFC attempted to resolve the uncertainties surrounding the scope of joint-infringement liability, the CAFC failed to provide guidance as to what constitutes "control or direction." Third, a less restrictive joint-infringement standard would not render the indirect-infringement provisions of the Patent Act meaningless, as suggested by the CAFC. Fourth, not all patents can be drafted in a "unitary" manner, and these patentees are left unprotected from infringers under the "control or direction" standard. Finally, the CAFC's "control-or-direction" standard does not further the policies that Congress sought to promote through the Patent Act.

1. The "Control-or-Direction" Standard is Not Adequately Supported by Legal Precedent

In *BMC*, the CAFC wrote, "Courts faced with a divided infringement theory have also generally refused to find liability where one party did not control or direct each step of the patented process."¹¹⁰ In support of this conclusion, the CAFC cited three cases: *Faroudja Laboratories v. Dwin Electronics, Inc.*, *Mobil Oil Corp. v. Filtrrol Corp.*, and the district court's opinion in *BMC* itself.¹¹¹

Faroudja, discussed above, lends little support to the narrow "control or direction" standard adopted by the CAFC. The *Faroudja* court wrote that in each successful joint-infringement suit "the entities found to directly infringe patented processes worked in concert with other entities to complete the process of infringement."¹¹² If anything, *Faroudja* seems more closely aligned with the *On Demand* "participation-and-combined-action" standard than the *BMC* "control or direction" standard.

The second case the CAFC relied upon for its assertion that courts "generally" require "control or direction" was *Filtrrol*.¹¹³ The CAFC cited to a portion of the *Filtrrol* opinion where the Ninth Circuit wrote, "We question whether a method claim can be infringed when two separate entities perform different operations and neither has control of the other's activities. No case

110. *Id.*

111. *Id.*

112. *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, 1999 WL 111788, at *6 (N.D. Cal. Feb. 24, 1999). A case cited for this proposition was *Shields v. Halliburton Co.*, the case from which the *On Demand* jury instruction was drawn.

113. *BMC*, 498 F.3d at 1380.

in point has been cited.”¹¹⁴ It should be noted, however, that *Filtrol* was decided in 1974. Although the Ninth Circuit “questioned” whether joint infringement could exist absent control in 1974, the *Filtrol* decision pre-dates *Shields*, *Monsanto*, *Cordis* and other cases that allowed joint-infringement claims to proceed *without* a showing of control.¹¹⁵ Furthermore, the Ninth Circuit devoted only a single paragraph to joint infringement in its *Filtrol* opinion.¹¹⁶ All in all, *Filtrol* is hardly strong support for the expansive statement that courts “generally” require control or direction.

Finally, the CAFC cited the district court’s opinion in *BMC*.¹¹⁷ It seems somewhat circular for the CAFC to cite the very decision it is affirming to buttress the claim that courts “generally” require control or direction. In sum, the CAFC’s “control or direction” standard probably stems more from policy concerns than from strong legal precedent.

2. “Control-or-Direction” Standard Creates, Rather Than Resolves, Uncertainty Regarding Joint Infringement

Facially, the *BMC* “control-or-direction” standard appears more explanatory than the “some-connection” test; the language itself is stronger and less ambiguous. However, the *BMC* test is not as lucid as it appears and falls victim to the same pitfalls as previous tests.

First, *BMC* does not clarify whether a contract between parties constitutes “control or direction.” The *BMC* opinion states that “[a] party cannot avoid infringement, however, simply by contracting out steps of a patented process to another entity.”¹¹⁸ Contracting out steps in such a manner would constitute “control” and subject the contracting party to direct infringement liability.¹¹⁹ This rationale seems sensible and is consistent with *On Demand*.¹²⁰

However, the very next paragraph of the *BMC* opinion states, “This court acknowledges that the standard requiring control or direction for a finding of joint infringement may in some circumstances allow parties to enter into arms-length agreements to avoid infringement.”¹²¹ Taken together, these two statements have once again muddled the waters. On one hand, a party

114. *Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291-92 (9th Cir. 1974).

115. *Shields*, *Monsanto*, and *Cordis* were decided in 1980, 1995 and 2002, respectively.

116. *See Filtrol*, 501 F.2d at 291-92.

117. *See BMC*, 498 F.3d at 1380.

118. *Id.* at 1381.

119. *Id.*

120. *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1345 (Fed. Cir. 2006) (noting that “Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method.”).

121. *BMC*, 498 F.3d at 1381.

cannot contract out steps of a patented process to avoid liability. On the other hand, sometimes a party can enter into arms-length agreements to avoid liability. What is the difference between a contract and an arms-length agreement? Can a party contract out steps of a patented process to avoid infringement liability, so long as the contract is made at arms-length?

Whether a contractual relationship constitutes a sufficient relationship between multiple parties to justify joint infringement liability has been an issue that courts have repeatedly wrestled with in joint-infringement cases. The internal inconsistency of the *BMC* opinion ensures that future courts will continue to struggle with the effect of a contractual relationship, and whether the agreement is “arms-length.”

Second, it is still unclear after *BMC* whether instructions constitute “control or direction.” In applying the “control-or-direction” test to the facts of *BMC*, the CAFC found inadequate “BMC’s evidence that Paymentech provides data (debit card number, name, amount of purchase, etc.) to the debit networks, absent any evidence that Paymentech also provides instructions or directions regarding the use of those data.”¹²² This statement suggests that the provision of instructions may constitute “control.”

The CAFC rejected, however, the idea that instruction, and hence control, could be inferred from the circumstances in *BMC*. The court noted, “BMC argues that instructions or directions [to the debit networks] can be inferred from the provision of these data, or that the data themselves provide instructions or directions.”¹²³ The CAFC dismissed this argument, holding, “[H]aving presented no evidence below to support either theory, BMC is not entitled to such an inference with respect to the debit networks that would allow it to survive summary judgment.”¹²⁴ What type of evidence would have entitled BMC to the desired inference? If BMC had proven that, absent any express instruction, it was industry practice for a debit network to act in a particular manner upon receipt of certain information, would that have entitled BMC to an inference that Paymentech had instructed the debit networks? Would such inferred instructions constitute control?

Although the CAFC has changed the language to be used in joint infringement cases by requiring “control or direction,” courts will continue to hash out the same old issues. Can a party avoid infringement liability by contracting with a third party to perform one or more steps of a patented process? Do instructions from one party to another warrant the aggregation of the parties’ actions for infringement purposes? Courts have perpetually struggled with these questions in joint-infringement suits, and the answers are only marginally clearer under the CAFC’s “control-or-direction” standard.

122. *Id.*

123. *Id.*

124. *Id.* at 1381-82.

3. Indirect Infringement Would Not be Obsolete Under a Broader Joint-Infringement Standard

Part of the CAFC's rationale for its decision in *BMC* was that to hold otherwise would render indirect-infringement liability unnecessary.¹²⁵ To briefly recap, to establish indirect-infringement liability, a plaintiff must prove: (1) that one party directly infringed the claim; and (2) that another party, with *mens rea*, either contributed to or induced the infringement.¹²⁶ Under the looser "participation and combined action" standard approved in *On Demand*, the CAFC concluded that "a patentee would rarely, if ever, need to bring a claim for direct infringement."¹²⁷

Contrary to this prediction, an indirect-infringement suit would not be so rare under a standard looser than "control or direction." In its amicus curiae brief in support of *BMC*, Freedom Wireless, Inc. provided examples of common situations in which inducement to infringe and contributory infringement would still be viable causes of action under a broader joint-infringement standard.¹²⁸

With respect to inducing infringement, Freedom Wireless writes:

A claim for inducement of infringement would still be asserted whenever, with *mens rea*, one person causes another to perform one or more steps of a patented method, but the inducer himself performs no steps. Under such a classic case of inducement, joint infringement has not occurred because the inducer performs no steps.¹²⁹

As suggested by Freedom Wireless, courts have commonly held a party liable for inducing infringement when that party cannot be liable as a direct infringer because it has not performed any element of the patented claim.¹³⁰ For instance, the defendant in *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.* induced infringement through its advertisements and instructions to customers.¹³¹ The patent in *Chiuminatta* described a method of cutting concrete before it hardened completely. Cardinal Industries, Inc.

125. *Id.* at 1381.

126. *Id.*

127. *Id.*

128. Brief for Freedom Wireless, Inc. as Amicus Curiae Supporting Appellants, *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373 (Fed. Cir. 2007), 2007 WL 4453981, at *8.

129. *Id.*

130. See generally, DONALD S. CHISUM, 5-17 CHISUM ON PATENTS § 17.04 [4] (Andrew Stein et al. eds., 2008) ("The Section 271(b) prohibition on active inducement of infringement covers a wide variety of acts.").

131. *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1312 (Fed. Cir. 1998).

(“Cardinal”) manufactured and sold rotary saws and did not personally perform any of the steps in the patented method claim. Nonetheless, the CAFC held Cardinal liable because the instructions for cutting cement that accompanied the saw induced the user of the saw to infringe the plaintiff’s patent.¹³²

Chiuminatta is an example of a common suit that could only be brought under § 271(b). The defendant in *Chiuminatta* did not perform any of the steps in the process claim at issue, so the plaintiff could not have brought suit on a joint-infringement theory.¹³³ Thus, contrary to the CAFC’s assertion, a joint infringement standard other than “control or direction” would not render § 271(b) superfluous.

Moreover, the CAFC’s argument with respect to contributory infringement is equally misguided. Whereas joint infringement allows a plaintiff to aggregate the conduct of several parties, each of whom have performed at least one step in the patented process, contributory infringement addresses a situation where a supplier sells a unique product with knowledge that its customer will use the product for infringing purposes.¹³⁴ A looser joint-infringement standard, therefore, would not impact the usefulness of contributory-infringement liability, unless the acts of producing and selling the product are elements of the patent claim. On this note, Freedom Wireless argues:

[C]ontributory infringement would be pled whenever, with *mens rea*, one person sells a component of a patented device which is not a staple of commerce possessing substantial non-infringing uses. Again, this common contributory infringement scenario has nothing to do with two persons acting in concert or collaborating to perform a patented method.¹³⁵

4. Patentees Whose Claims Cannot be Drafted in “Unitary” Manner are Left Without Protection

To justify narrowing the scope of liability in joint-infringement cases, the CAFC argued that a patentee with a carefully drafted “unitary” patent claim would rarely need to bring a joint infringement suit.¹³⁶ The CAFC is

132. *Id.*

133. *epicRealm Licensing, LLC v. Autoflex Leasing, Inc.*, 492 F. Supp. 2d 608, 630 (E.D. Tex. 2007) (“There is no authority, however, for imposing liability for direct infringement on a party that does not perform *any* of the steps of the patented method”) (emphasis added).

134. *Id.* at 627 (“There can be no liability under 35 U.S.C. § 271(a) for direct infringement of a method or process claim where the accused infringer does not itself perform any of the steps set forth in one or more of the asserted claims”).

135. Brief Amicus Curiae Supporting Appellants, *supra* note 130, at *8.

136. *BMC*, 498 F.3d at 1381.

undoubtedly correct that a patent claim, when possible, should be drafted in this manner to facilitate its enforcement. Furthermore, most patent claims, including the claim at issue in *BMC*, can be drafted in a unitary fashion.¹³⁷

The CAFC implicitly acknowledged, however, that not *all* patent claims can be drafted in this manner. It wrote, “The concerns over a party avoiding infringement by arms-length cooperation can *usually* be offset by proper claim drafting. A patentee can *usually* structure a claim to capture infringement by a single party.”¹³⁸ To illustrate that not all patents can be drafted in the manner suggested, *BMC*, in its petition for a rehearing en banc, wrote that “[t]he Panel’s suggestion that claims should be written with reference to a single party’s supplying or receiving each element of the claimed process would be unworkable for a serial process involving acts by three or more persons.”¹³⁹

Holders of such patents are left without protection under the new “control-or-direction” standard. Moreover, as *BMC* points out, a patent is no less valuable or worthy of protection just because it cannot be drafted in a “unitary” manner:

The Panel’s statement that “[a] patentee can usually structure a claim to capture infringement by a single party” ignores a person’s constitutional right to obtain meaningful patent protection for his invention and the patentee’s obligation to clearly claim the invention. This right extends to an inventive process that requires multiple parties to carry out that process. That is, an invention directed to a process that uses multiple parties is no less an invention under 35 U.S.C. § 101.¹⁴⁰

5. *BMC*’s “Control-or-Direction” Standard Does Not Promote the Goals of the Patent Act

The purpose of the Patent Act is to promote the disclosure of new and useful inventions.¹⁴¹ As an incentive to publicize inventions rather than withhold them, the Patent Act gives patentees an exclusive monopoly over their inventions for a period of time.¹⁴² By providing legal protection for patented

137. *Id.*

138. *Id.* (emphasis added).

139. Plaintiff-Appellant *BMC Resources, Inc.*’s Petition for Rehearing en banc at *15, *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373 (Fed. Cir. 2007) (No. 06-1503).

140. *Id.* at *14-15.

141. See *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 330-31 (1945) (“The primary purpose of our patent system is . . . the advancement of the arts and sciences.”).

142. See *Pfaff v. Wells Elec., Inc.*, 525 U.S. 55, 63 (1998).

inventions, the Patent Act benefits society as a whole.¹⁴³ If patentees are unsure of this protection, however, the incentive to publicize their inventions is diminished.

In *BMC*, the CAFC unabashedly recognized that multiple parties in arms-length agreements could collectively perform each and every element of a patent claim yet avoid infringement liability, so long as one party did not control or direct the other. Concededly, the harshness of this rule can be mitigated in many cases by proper claim drafting. Certain patents, however, are not amenable to “unitary” claim drafting. Other patentees simply might not have realized or anticipated the necessity of drafting a “unitary” claim. If one seeks to exploit the value of such a patent, he need only divide the elements of the claim between himself and another party and avoid indicia of “direction or control.”

By reducing the legal protection available for patents involving multiple parties, inventors are less likely to seek patent protection for socially-useful discoveries, in contravention of the goals of the Patent Act.

B. What Should Patentees Do to Protect Their Intellectual Property Rights?

1. Patentees Should Be Aware of Industries Most Likely Affected by BMC

Despite its imperfections, patentees must adapt to the CAFC’s “control-or-direction” standard. It is valuable to consider the industries and types of patents most likely affected by the “control-or-direction” standard. First, business method patents commonly involve multiple parties, and therefore, the holders of such patents may be adversely affected by *BMC*.¹⁴⁴ Many business method patents are held by credit-card companies and financial-services institutions.¹⁴⁵ These patents often:

[I]nvolve interactions or communications between central locations (e.g., a Web site, a customer service representative, a call routing location, etc.) and remote locations (e.g., a customer using a PC to access the Web site, a customer using a phone to call the customer service representative, etc.). As a result, sometimes patent claims will be drafted setting forth activities that are performed by different actors in these systems. For example, a claim

143. See *Sinclair*, 325 U.S. at 331 (“[The Patent Act’s] inducement is directed to disclosure of advances in knowledge which will be beneficial to society; it is not a certificate of merit, but an incentive to disclose.”).

144. Thomas J. Scott, Jr. & Stephen T. Schreiner, *Planning for the Brave New World: Are Business Method Patents Going to be Second Class Citizens?*, 19 No. 6 INTELL. PROP. & TECH. L.J. 6, 10-11.

145. *Id.* at 8. (For example, American Express, MasterCard, Capital One, Wells Fargo and Charles Schwab, which hold 65, 33, 20, 16 and 23 business method patents, respectively).

may recite a customer transmitting data to a server (actor is the customer), the server processing the data to generate a result (actor is the company running the Web site), and so forth.¹⁴⁶

Therefore, credit-card companies and financial-services institutions should take special notice of *BMC* and make every effort to draft future claims in a unitary manner in order to protect their business method patents.

Second, computer-networking patent claims are likely to be impacted by *BMC*.¹⁴⁷ Professor Lemley notes that “distributed or divided patent claims are surprisingly common, particularly in the field of computer networking, where a patented process may involve some steps performed on the client side and others performed on the server side.”¹⁴⁸ For example, the patent at issue in *epicRealm Licensing, LLC v. Autoflex Leasing, Inc.* pertained to a method of generating web pages through the interaction of a web server, a page server, and various other data sources.¹⁴⁹

Finally, several recent joint-infringement cases have involved patents for medical products and methods in which the design or manufacturing component of the claim was performed by one party, and doctors performed the remaining elements of the claim.¹⁵⁰

2. Draft Claims in “Unitary” Form

Patent applicants should follow the CAFC’s advice and draft patent claims in “unitary form” whenever possible.¹⁵¹ As pointed out by the CAFC and Professor Lemley, most patent claims can be drafted in this manner.¹⁵² Considering the relative ease of drafting and enforcing “unitary” claims,

146. *Id.* at 10.

147. Lemley et al., *supra* note 31, at 256.

148. *Id.*

149. *epicRealm Licensing, LLC*, 492 F. Supp. 2d at 616.

150. *See, e.g.,* *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1297 (Fed. Cir. 2005) (concerning a method of securing surgical implants to stabilize and align the bones of a patient’s spine without damaging the spinal cord); *Cordis Corp. v. Medtronic AVE, Inc.*, 194 F. Supp. 2d 323, 328-30 (D. Del. 2002) (concerning a method of implanting and inflating an expandable stent into diseased coronary arteries).

151. Lemley, *supra* note 31, at 272 (“First and foremost, it is important to recognize the risk that divided or distributed patent claims may leave the patentee with no remedy at all. Given such recognition, appropriate refinements to claiming strategies are often straightforward.”).

152. *Id.* (“Most inventions that involve cooperation of multiple entities can be covered using claims drafted in unitary form simply by focusing on one entity and whether it supplies or receives any given element.”); *see also BMC Res., Inc.*, 498 F.3d at 1381 (“A patentee can usually structure a claim to capture infringement by a single party.”).

every patentee should take care to focus on a single entity in each patent claim. Doing so will save the patentee the cost and uncertainty of litigating a joint infringement suit.¹⁵³

C. Potential Solutions to the Problems Presented by Joint-Infringement Claims

Two very different courses of action could be taken to address the difficult issues presented by joint-infringement claims: (1) the CAFC could clarify the “control-or-direction” standard; or (2) Congress could pass legislation addressing infringement suits involving multiple parties. Specifically, Congress could adopt a comparative responsibility scheme for suits against multiple alleged infringers. Although this comment merely sketches out a proposed framework in summary form, a comparative responsibility scheme would address many of the unique issues presented by joint-infringement claims that courts have been unable to adequately handle under current law.

1. Clarify the “Control-or-Direction” Standard

As discussed above, the vagueness and inconsistencies of the *BMC* opinion create doubt as to what constitutes “control or direction.” The most contentious question emerging from *BMC* is whether a contractual relationship between parties constitutes “control” for infringement liability purposes. The CAFC’s answer to this question was equivocal. On one hand, a contract could serve as evidence that one party controlled the other. On the other hand, parties in an arms-length agreement could avoid infringement liability. At the very least, the CAFC must clarify in future cases how courts should deal with contractual relationships in evaluating “control or direction.”

2. Pass Legislation Adopting a Comparative Responsibility Scheme

Section 271 of the Patent Act functions well when a single defendant performs every element of a patented claim. This section is ill-suited, however, to address a situation in which multiple parties collectively perform each and every element of a patent claim. Instead of perpetually struggling to make the theory of joint infringement work within the confines of § 271, Congress could adopt an entirely different scheme to address infringement claims against multiple parties. Patent infringement is a claim based in tort, and the trend in tort law has been to adopt schemes of comparative negligence, comparative fault, or comparative responsibility.¹⁵⁴ Although adopt-

153. See Lemley, *supra* note 31, at 272-76 (giving more information on drafting unitary claims).

154. See *Carbice Corp. of Am. v. Am. Patents Dev. Corp.*, 283 U.S. 27, 33 (1931) (“Infringement, whether direct or contributory, is essentially a tort, and implies invasion of some right of the patentee.”). See also *In re Masters Mates & Pilots Pension Plan & IRAP Litig.*, 957 F.2d 1020, 1028 (2d Cir. 1992) (quot-

ing a comparative responsibility scheme with respect to infringement claims involving multiple parties would require drastic change, it would solve many of the persistent issues that joint infringement law seems incapable of handling.

a. Potential Roadmap for Handling Infringement Claims

If Congress adopted a comparative responsibility scheme, the analysis of infringement claims could proceed in the following manner. The first question would be whether each and every element of the patent claim at issue has been infringed by *someone*.¹⁵⁵ At this stage of the inquiry, it is irrelevant whether the elements were performed by a single entity or multiple entities; the question is simply whether each element of the patent claim was indeed practiced. If the answer is no, the inquiry stops here because infringement liability cannot arise unless every element of the patent claim has been performed.¹⁵⁶

If the answer is yes, then the court must ask whether every step of the patent claim was performed by a single entity or its agents.¹⁵⁷ If the answer to this question is affirmative, then the normal infringement provisions of § 271 of the Patent Act should apply. The entity practicing each step of the claim should be held liable for direct infringement, and suit against any additional third parties may potentially be brought under § 271(b) or § 271(c). Since § 271 works well in single-infringer suits, it seems unnecessary to subsume the entire infringement analysis into a comparative framework. Furthermore, leaving § 271 intact in these scenarios will act as an incentive for patentees to draft unitary claims to take advantage of the strict liability provided under § 271(a).

ing *Glus v. G.C. Murphy Co.*, 629 F.2d 248, 252 (3d Cir. 1980), *rev'd on other grounds*, 451 U.S. 935 (1981)) ("It is now widely recognized that fundamental fairness demands a sharing of the liability."); *Veazey v. Elmwood Plantation Assocs.*, 650 So. 2d 712, 718-19 (La. 1994) (finding that the Louisiana comparative fault scheme is broad enough to encompass the comparison of negligence, strict liability torts, and intentional torts).

155. See *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005) (quoting *Roberts Dairy Co. v. U.S.*, 530 F.2d 1342, 1354 (Ct. Cl. 1976)) ("[I]t is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized.").

156. *Id.*

157. See Lemley et al., *supra* note 31, at 259-60 (discussing the application of traditional § 271 principles rather than the comparative responsibility framework and also talking about the well-established idea that a principal is not relieved from infringement liability by virtue of his agent having performed one or more steps of a patented claim, since a principal and agent are viewed as one legal entity, and these cases do not address the issue of "true" joint infringement claims).

On the other hand, if every element of the patent claim was practiced, but by multiple parties rather than a single entity, then a comparative responsibility scheme could be used. The plaintiff could bring suit against each party involved in the infringement, regardless of whether the party actually performed a step in the patent claim.¹⁵⁸ At this point, the fact-finder would be required to account for *mens rea* and to apportion responsibility for the patentee's damages between: (1) the named defendants; (2) non-parties to the suit who bear some responsibility for the patentee's damages; and (3) the patentee himself.

The benefits of a comparative responsibility scheme are manifold. First, by avoiding "all-or-nothing" outcomes, a comparative-responsibility scheme apportions liability in a manner that is more equitable for both the patentee and the alleged infringers. Second, a comparative-responsibility scheme eliminates a loophole in current infringement law. Third, by considering *mens rea*, a comparative-responsibility scheme recognizes that joint infringement is incompatible with the strict liability offense of direct infringement. Finally, a comparative-responsibility scheme more effectively promotes the goals and policies of the Patent Act.

i. Flexibility and the Avoidance of an All-or-Nothing Approach

A comparative-responsibility scheme eschews rigidity and allows for a flexible approach that produces equitable results. A simple starting point for courts under a comparative-responsibility scheme might be to assume that each defendant should be liable in proportion to the number of steps he performed in the patented process. From there, courts should analyze the conduct and *mens rea* of each party involved, including the patentee, and apportion liability accordingly.

In this analysis, courts should still consider factors such as "control or direction," but they should not be dispositive. For instance, assume that a defendant only performed one step in a ten-step process. As a starting point, the court might assume that this defendant should be apportioned ten percent of the patentee's total damages. If, however, the evidence showed that this defendant controlled and manipulated the other parties throughout the infringing process, the fact-finder might find that the controlling defendant was responsible for 90 or 100 percent of the patentee's damages.

The court should also examine the degree of care used by the patentee in drafting his claim, but again this consideration should not be outcome-determinative. For instance, assume that the patentee could have drafted a "uni-

158. Since *mens rea* would be considered in a comparative responsibility scheme, it makes little sense to differentiate between "direct" and "indirect" infringers in this context. Under a comparative responsibility scheme, a conniving defendant who induces other to infringe could be principally responsible for plaintiff's damages, despite not having performed a single step of the patented process.

tary” patent claim but failed to do so. His failure to properly draft his claim makes the patentee partially responsible for his injury, and his recovery should be reduced by that amount. The patentee is punished for not adequately protecting his patent, yet is not denied recovery entirely.

In addition to protecting the patentee, a comparative-responsibility scheme is beneficial to defendants because it eliminates the incentive for a patentee to claim infringement against the party it believes has the “deepest pockets.” For example, assume that Microsoft performs one very minor step in a patented process. Under current joint-infringement law, a patentee might be motivated to argue that Microsoft “controlled” the other parties involved and should be liable for all of the patentee’s damages. Under a comparative-responsibility scheme, however, a defendant such as Microsoft need not worry about a patentee aggressively litigating and seeking large damages merely because of its perceived financial resources. Instead, such a defendant’s liability would be based on its actual conduct and role in the infringing process.

ii. Closes Loopholes in Infringement Liability

A comparative-responsibility scheme is also beneficial because it would close loopholes and encourage efficient behavior. In a sense, *BMC* sets forth a blueprint to avoid infringement liability. A potential infringer can avoid liability by: (1) seeking out patent claims drafted in “distributed” rather than “unitary” fashion; and (2) entering into an “arms-length” agreement with a party of equal bargaining strength under which each party performs some, but not all, of the elements of the patented claim.¹⁵⁹ A comparative-responsibility scheme, on the other hand, eliminates the incentive to circumvent infringement liability.

iii. Comparative-Responsibility Scheme Recognizes that an Equitable Joint-Infringement Rule is Incompatible with Strict Liability

Since it is a form of direct infringement, joint infringement is technically a strict liability offense. One gets the sense, however, that courts are more willing to accept a joint-infringement theory when they feel that one party was “at fault.”¹⁶⁰ For example, under the “control-or-direction” standard of *BMC*, the CAFC ostensibly considers joint infringement a strict liability offense. The court, however, asks whether a “mastermind” defendant had “control or direction” over the performance of each step of the patented process. It seems, therefore, that the CAFC uses “control or direction” as a proxy for *mens rea*. This conclusion is supported by the CAFC’s distinction

159. See *BMC Res., Inc.*, 498 F.3d at 1381.

160. See, e.g., *E.I. DuPont de Nemours & Co. v. Monsanto Co.*, 903 F. Supp. 680, 735 (D. Del. 1995) (“[A] party cannot avoid liability for infringement by having someone else perform one or more steps of the patented process for them”).

between “contracting out steps of a patented process” and engaging in “arms-length agreements.”¹⁶¹ When a party “contracts out steps” he is liable for infringement because “[i]t would be unfair indeed for the mastermind in such situations to escape liability.”¹⁶² On the other hand, a defendant avoids infringement liability when he performs part of a patented process within the scope of an arms-length agreement.¹⁶³ “Contracting out steps” seems to connote bad intent, whereas an “arms-length” agreement sounds much more innocent. This distinction should be irrelevant in the case of a true strict-liability offense. The existence of this distinction supports the conclusion that the CAFC furtively considers the defendant’s *mens rea* through the “control or direction” standard.

Instead of considering *mens rea* in this roundabout manner, a comparative responsibility scheme directly addresses it. Courts could openly consider whether a party was consciously trying to avoid infringement liability, and distribute responsibility accordingly.

iv. Comparative-Responsibility Scheme Better Effects the Goals of the Patent Act

A comparative responsibility scheme would also further the goals of the Patent Act by protecting the intellectual property rights of patentees and encouraging innovation. In drafting the Patent Act, Congress sought to protect the rights of all patent holders. The CAFC’s “control or direction” standard, however, creates several categories of second-class patentees, including: patentees whose claims have been practiced by multiple parties, absent control, rather than a single party and patentees whose claims cannot be drafted in a “unitary” fashion. A comparative-responsibility scheme, on the other hand, more fully protects all patentees. It neither punishes the holders of multiple-user patent claims nor creates loopholes for arms-length contract partners to avoid infringement.

Because a comparative-responsibility scheme would more effectively protect the rights of patent holders, inventors would have greater incentive to publicize valuable inventions. By increasing the incentive to patent socially useful inventions, a comparative responsibility scheme would further the principal goal of the Patent Act.¹⁶⁴

161. *BMC Res., Inc.*, 498 F.3d at 1381.

162. *Id.*

163. *Id.*

164. *See Sinclair*, 325 U.S. at 330-31 (1945) (“The primary purpose of our patent system is . . . the advancement of the arts and sciences. Its inducement is directed to disclosure of advances in knowledge which will be beneficial to society; it is not a certificate of merit, but an incentive to disclosure.”).

IV. CONCLUSION

Joint infringement is a troublesome area of the law. On one hand, courts want to protect patentees and encourage innovation. After all, it matters little to the patentee whether his patent was infringed by one person or two – he suffers the same injury either way. On the other hand, it seems unjust to impose liability on those who innocently play a minor role in the infringement of a patented process.

Courts have repeatedly tried, and largely failed, to strike some equitable middle ground between these two extremes. In the CAFC's first definitive foray into joint-infringement law, it adopted a "control-or-direction" standard. In addition to being quite unfavorable to patentees, the CAFC fails to adequately address exactly what constitutes "control or direction." Thus, joint infringement will likely continue to be a confused and unpredictable area of law.

This comment suggests that either the CAFC clarify the "control-or-direction" standard, especially with regard to the impact of contractual relations between alleged infringers, or Congress pass legislation that specifically addresses infringement by multiple parties. A comparative-responsibility scheme is attractive because it would promote the goals of the Patent Act, protect patentee's intellectual property rights, and more equitably distribute infringement liability.

